

## REMARKS

Reconsideration and the timely allowance of the pending claims, in view of the following remarks, are respectfully requested.

In the pending Office Action, the Examiner rejected claims 1 and 3, under 35 U.S.C. §112, ¶2 as allegedly containing indefinite terms; rejected claim 1, under 35 U.S.C. §103(a) as allegedly being unpatentable over Nishida '680 (U.S. Patent No. 4,974,680) in view of Kawasaki'730 (U.S. Patent No. 5,782,730); and rejected claim 3, under 35 U.S.C. §103(a), as allegedly being unpatentable over Nishida '680 and Kawasaki'730 and further in view of Nagatsuka '426 (U.S. Patent No. 5,933,426).

By this Amendment, claims 1 and 3 have been amended to provide a clearer presentation of the claimed subject matter. Applicants submit that no new matter has been introduced.

Insofar as the §112, ¶2 and §103(a) rejections are still deemed relevant in view of the claim changes, Applicants traverse these rejections for the following reasons:

### I. Rejections Under §112, ¶2.

The Examiner asserted that claim 1 was indefinite because the claimed inventions depends on the type of paper being fed and the features are allegedly not concretely defined.

To this end, Applicants have amended the claim language to recite a “postal item conveying apparatus that conveys postal items of different thicknesses”. In other words, because the thickness of the postal items through the apparatus actually changes, the coefficient of friction between the first layer and the postal items being fed also changes relative to the type of material being conveyed. Applicants submit that, by restricting the paper-like materials to postal matters, the surface condition (*i.e.*, roughness) is certainly limited, so that the limitations that the coefficient of dynamic friction between the first layer and the postal matters materials is more than 0.7 at less than a relative velocity difference 200 mm/s is clearly definite.

As to the thickness of the second layer, the claim has been amended to recite that the second layer is configured with a thickness that is more than 1.8 times of the most thick

postal item. In this manner, when the most thickness is assumed to be a specific value, for example, 6 mm, the thickness of the second layer is also defined to a specific value.

Accordingly, Applicants submit that claim 1 is sufficiently definite under the requirements of §112, ¶2. Accordingly, Applicants request the immediate withdrawal of these rejections,

## II. Rejections Under §103(a).

As noted above, independent claim 1 is directed to paper-like material conveying apparatus and positively recites, *inter alia*, a driven roller including a first layer formed with a solid elastic material that is in contact with the drive roller and a *second layer formed with a foam elastic material that is formed inside the first layer*. Claim 1 further recites that the *first layer is configured with a coefficient of dynamic friction of more than 0.7 between the first layer and the postal items to limit a relative velocity difference between the first layer and the postal items to less than 200 mm/s*.

Such structural features are amply supported by the embodiments disclosed throughout the written description. For example, the written description states that in conventional apparatuses, the relative high velocity of heavy postal matters may cause conveying jams. (*See*, Specification: page 3, lines 5-16). The disclosed embodiments, therefore provide that, to provide satisfactory conveyance performance and reduce the possibility of jams, the thickness **t2** of sponge **22** should be 1.8 times of the maximum thickness of postal matter, the thickness **t1** of rubber **21** should be 1/2 of the thickness **t2** of sponge **22**, the hardness of sponge **22** should be below 40, and that the rubber material should have a coefficient of dynamic friction becomes 0.7 or more at the relative velocity difference below 200 mm/s. (*See*, Specification: page 17, lines 16-20; page 19, lines 6-9).

Applicants submit that none of the asserted references teach or suggest each and every element of claim 1, including the features identified above. In particular, Nishida '680 describes a sheet feeding mechanism with two driving shafts **16** and **26** and respective gears **17** and **27** for rotating the shafts **16**, **26**. The bail roller **20**, which is attached to driving shaft **26**, has a double structure made up of an outer layer **23** and an inner layer **24**, as shown in Fig. 2A. (Nishida '680: col. 2, lines 22-29.) The outer layer **23** is formed from engineering plastics such as polyacetal, nylon, ABS, or the like. (Nishida '680: col. 2, lines 34-36.) The outer layer **23** preferably is made from polyacetal with a friction coefficient in the range of

0.3 to 0.5. (Nishida '680: col. 2, lines 42-44.) The inner core 24 is formed of an elastically deformable material such as urethane foam, soft rubber, or the like. (Nishida '680: col. 2, lines 53-56.)

With this said, Applicants submits that, by virtue of being directly driven by drive shaft 26, bail roller 20 cannot be construed as a driven roller. As such, Nishida '680 does not disclose a *driven roller* including a first layer formed with a solid elastic material that is in contact with the drive roller and a *second layer formed with a foam elastic material that is formed inside the first layer*, as required by claim 1.

Equally notable, Nishida '680 fails to suggest that the driven roller has *first layer is configured with a coefficient of dynamic friction of more than 0.7 between the first layer and the postal items to limit a relative velocity difference between the first layer and the postal items to less than 200 mm/s*, as required by claim 1.

Moreover, Applicants submit that the remaining asserted references, Kawasaki '730 and Nagatsuka '426, do nothing to cure the deficiencies of Nishida '680 noted above and fail in their own right to teach the combination of elements of claim 1. That is, Kawasaki '730 describes a pressure roller 1 that comprises a metal core 2, an elastic layer 3 made of silicone rubber, and a top layer 4 covering the elastic layer 3 and made of a fluororesin having a coefficient of dynamic friction. (Kawasaki '730: col. 3, lines 1-5.) Coefficients of dynamic friction for the fluororesin top layer 4 are shown in Tables 2-3 and range between 0.15 and 0.40. (Kawasaki '730: col. 3, lines 18-20, and at Tables 2 and 3.) As discussed in Kawasaki '730, the coefficient of friction of 0.25 or more is preferred to reduce the occurrence of image failure. (Kawasaki '730: col. 5, lines 31-41, and also at Tables 4 and 5.) With respect to the relative thicknesses of the top layer 4 and the elastic layer 3, Kawasaki '730 states that the evaluated pressure rollers had an outer diameter of 15.8 mm, a thickness of the silicone rubber layer (the elastic layer 3) of 3 mm, and a thickness of the fluororesin top layer 4 of 50  $\mu\text{m}$ . (Kawasaki '730: col. 5, lines 51-54.)

Much like Nishida '680, Kawasaki '730 fails to teach or suggest that the *driven roller* includes a first layer formed with a solid elastic material that is in contact with the drive roller and a *second layer formed with a foam elastic material that is formed inside the first layer*. Kawasaki '730 also fails to suggest that the *first layer is configured with a coefficient of dynamic friction of more than 0.7 between the first layer and the postal items to limit a*

*relative velocity difference between the first layer and the postal items to less than 200 mm/s..*

Applicants further submit that Nagatsuka '426 is similarly devoid of these limitations. Thus, for at least these reasons, Applicants submit that none of the asserted references are capable of rendering claim 1 unpatentable. As such, claim 1 is clearly patentable. And because claim 3 depends from claim 1, claim 3 is patentable at least by virtue of dependency as well as for its additional recitations.

## II. Conclusion.

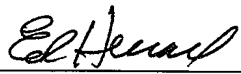
All matters having been addressed and in view of the foregoing, Applicants respectfully request the entry of this Amendment, the Examiner's reconsideration of this application, and the immediate allowance of all pending claims.

Applicants' representative remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number **03-3975**. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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